



PATENT  
Attorney Docket No. MIT-04488

3629  
\$

16/18/02 not 16/18/02  
EP  
11-21-02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

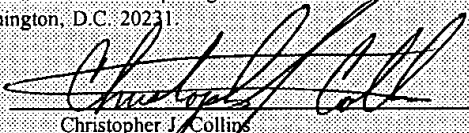
In re Application of: Douglas P. Hart *et al.*  
Serial No.: 09/617,556  
Filed: 07/17/00  
Entitled: Textured Seal For Reduced Wear

Group No.: 3629  
Examiner: G. Binda

INFORMATION DISCLOSURE  
STATEMENT TRANSMITTAL

Assistant Commissioner for Patents  
Washington, D.C. 20231

RECEIVED  
NOV 20 2002  
GROUP 3600

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)	
I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.	
Dated: <u>November 12, 2002</u>	By: <u></u> Christopher J. Collins

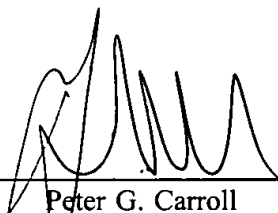
Sir or Madam:

Enclosed please find an Information Disclosure Statement and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

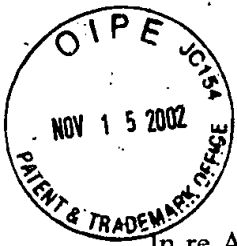
A check for \$180.00 is also enclosed pursuant to 37 C.F.R. § 1.17(p) for filing this Information Disclosure Statement after three months as set forth in 37 C.F.R. § 1.97(c).

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1290. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Dated: November 12, 2002

  
Peter G. Carroll  
Registration No. 32,837

MEDLEN & CARROLL, LLP  
101 Howard Street, Suite 350  
San Francisco, California 94105  
617/252-3353



PATENT

Attorney Docket No. MIT-04488

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Douglas P. Hart *et al.*

Serial No.: 09/617,556

Filed: 07/17/00

Entitled: Textured Seal For Reduced Wear

Group No.: 3629

Examiner: G. Binda

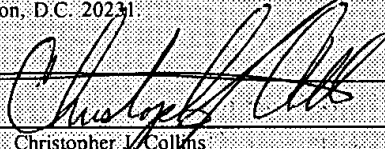
GROUP 3600

NOV 20 2002

RECEIVED

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

<b>CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)</b>	
I hereby certify that this correspondence (along with any referred to as being attached or enclosed) is, on the date shown below, being deposited with the U.S. Postal Service with sufficient postage as first-class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.	
Dated: <u>November 12, 2002</u>	By:  Christopher J. Collins

Sir or Madam:

The citations listed below, copies attached, may be material to the examination of the above-identified continuation application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

Applicants have become aware of the following printed publications which may be material to the examination of this application:

11/18/2002 SZENDIE1 00000070 09617556

01 FC:1806

180.00 OP

- U.S. Pat. No. 1,876,520 to Newkirk *et al.*;
- U.S. Pat. No. 2,009,281 to Stein;
- U.S. Pat. No. 2,233,902 to Schmied;
- U.S. Pat. No. 2,489,715 to Mark, Jr. *et al.*;
- U.S. Pat. No. 3,312,376 to Rooney *et al.*;
- U.S. Pat. No. 3,497,225 to Workman;
- U.S. Pat. No. 3,523,682 to Jensen;
- U.S. Pat. No. 3,572,730 to Otto *et al.*;
- U.S. Pat. No. 3,616,125 to Bowling;

11/18/2002 SZENDIE1 00000070 09617556

- U.S. Pat. No. 3,704,019 to McHugh;
- U.S. Pat. No. 3,744,805 to Heinrich;
- U.S. Pat. No. 3,801,113 to Jackson;
- U.S. Pat. No. 3,973,781 to Grörich;
- U.S. Pat. No. 4,084,826 to Vossieck *et al.*;
- U.S. Pat. No. 4,288,083 to Braconier;
- U.S. Pat. No. 4,447,064 to Ehrmann *et al.*;
- U.S. Pat. No. 4,491,331 to Salant *et al.*;
- U.S. Pat. No. 4,560,174 to Bisi;
- U.S. Pat. No. 4,562,122 to Hodes *et al.*;
- U.S. Pat. No. 4,610,319 to Kalsi;
- U.S. Pat. No. 4,619,534 to Daly *et al.*;
- U.S. Pat. No. 4,856,794 to Boyers *et al.*;
- U.S. Pat. No. 4,973,068 to Lebeck;
- U.S. Pat. No. 5,069,509 to Johnson *et al.*;
- U.S. Pat. No. 5,090,713 to Johnson;
- U.S. Pat. No. 5,195,754 to Dietle;
- U.S. Pat. No. 5,201,531 to Lai;
- U.S. Pat. No. 5,222,743 to Goldswain *et al.*;
- U.S. Pat. No. 5,230,520 to Dietle *et al.*;
- U.S. Pat. No. 5,322,299 to Terai;
- U.S. Pat. No. 5,380,016 to Reinsma *et al.*;
- U.S. Pat. No. 5,454,572 to Pospisil;
- U.S. Pat. No. 5,498,007 to Kulkarni *et al.*;
- U.S. Pat. No. 5,678,829 to Kalsi *et al.*;
- U.S. Pat. No. 5,738,358 to Kalsi *et al.*;
- U.S. Pat. No. 5,823,541 to Dietle *et al.*;
- Japanese Pat. No. 56-150661<sup>1</sup>;

---

<sup>1</sup> This Japanese patent is not supplied and is not on the 1449. If the examiner requires this patent, we will seek to obtain it. This patent was supplied in the parent case U.S. Patent 6,105,968.

- U.K. Pat. No. 499,480<sup>2</sup>;
- U.K. Pat. No. 1,215,221;
- WIPO No. 95/03504;
- WIPO No. 97/01721;
- Ayala *et al.*, "Seal Design for Reduced Wear in Abrasive Slurries," Proceedings from 1997 ASME Fluids Engineering Division Meeting, June, 1997<sup>3</sup>;
- Ayala *et al.*, "Wear of elastomeric seals in abrasive slurries," WEAR 220, Elsevier Science S.A., pp. 9-21 (1998)<sup>4</sup>;
- Langford *et al.*, "A New Hydrodynamically Lubricated Bearing Seal for Improving Rock Bit Performance," ASME, reprinted from PD-vol. 27, Drilling Technology Symposium (1990)<sup>5</sup>;
- Horve, L., "Shaft Seals for Dynamic Applications," Marcel Decker, Inc., NY, pp. 338-339 (1996)<sup>6</sup>;
- Roberts "No Gap" Piston Rings specification sheet, Roberts Mfg. Co., St. Louis, MO, Mar. (1943).

---

<sup>2</sup> This United Kingdom patent is not supplied and is not on the 1449. If the examiner requires this patent, we will seek to obtain it. This patent was cited by the Examiner in the parent case U.S. Patent 6,105,968

<sup>3</sup> We have been unable to locate this reference. If the examiner requires this reference, we will seek to obtain it. This reference was cited by the Examiner in the parent case U.S. Patent 6,105,968.

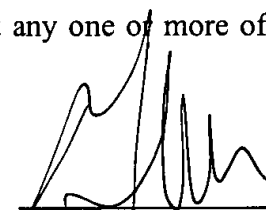
<sup>4</sup> We have been unable to locate this reference. If the examiner requires this reference, we will seek to obtain it. This reference was cited by the Examiner in the parent case U.S. Patent 6,105,968.

<sup>5</sup> We have been unable to locate this reference. If the examiner requires this reference, we will seek to obtain it. This reference was cited by the Examiner in the parent case U.S. Patent 6,105,968.

<sup>6</sup> We have been unable to locate this reference. If the examiner requires this reference, we will seek to obtain it. This reference was cited by the Examiner in the parent case U.S. Patent 6,105,968.

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

Dated: November 12, 2002

  
\_\_\_\_\_  
Peter G. Carroll  
Registration No. 32,837

MEDLEN & CARROLL, LLP  
220 Montgomery Street, Suite 2200  
San Francisco, California 94104  
617/252-3353